

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN BIOMEDICAL TECHNOLOGY SCIENCE AND TECHNOLOGY

BMET 101: INTRODUCTION TO BIOMEDICAL SCIENCES

STREAMS: BSC BMET

TIME: 2 HOURS

DAY/DATE: MONDAY 16/12/2024

2.30 P.M – 4.30 P.M.

INSTRUCTIONS

- Answer question **ONE (COMPULSORY)** and any other **TWO** questions.
- Sketch diagrams may be used whenever they may help to illustrate your answer.
- Do not write anything on the question paper.
- This is a closed book exam. **No** reference materials are allowed in the examination room.
- There will be **No** use of mobile phones or any other unauthorized materials.
- Write your answers legibly and use your time wisely.

Questions

QUESTION 1 (COMPULSORY) (30 MARKS)

- a) Assuming you have been employed as a medical representative in a multinational pharmaceutical company that is facing increasing generic competition; explain the strategies you will suggest to your employer so as to help overcome the competition. (8 marks)
- b) Highlight any FIVE functions of nucleotides. (5 Marks)
- c) Distinguish between Biomedical Sciences and Biomedical technology. (2 marks)
- d) Illustrate structural adaptations of mitochondrion that confers its functions. (4 Marks)
- e) Describe the scope of Biomedicine. (5 Marks)
- f) Outline any THREE applications of medical imaging techniques in disease diagnosis. (3 marks)
- g) Briefly describe the particulate theory of matter. (3 Marks)

QUESTION 2 (20 MARKS)

- a) Discuss ethics in practice of biomedical sciences. (10 marks)
- b) Compare and contrast biomedicine with biochemistry and medicine. (10 marks)

QUESTION 3 (20 MARKS)

- a) Discuss using appropriate examples, the various components and functions of a positive feedback mechanism. (10 Marks)
- b) Describe any TEN areas of specialization of a Biomedical Scientist. (10 marks)

QUESTION 4 (20 MARKS)

- a) Highlight any TEN differences between DNA and RNA. (10 Marks)
 - b) Using appropriate examples, explain diversity and classification of human body cells (10 marks)
-